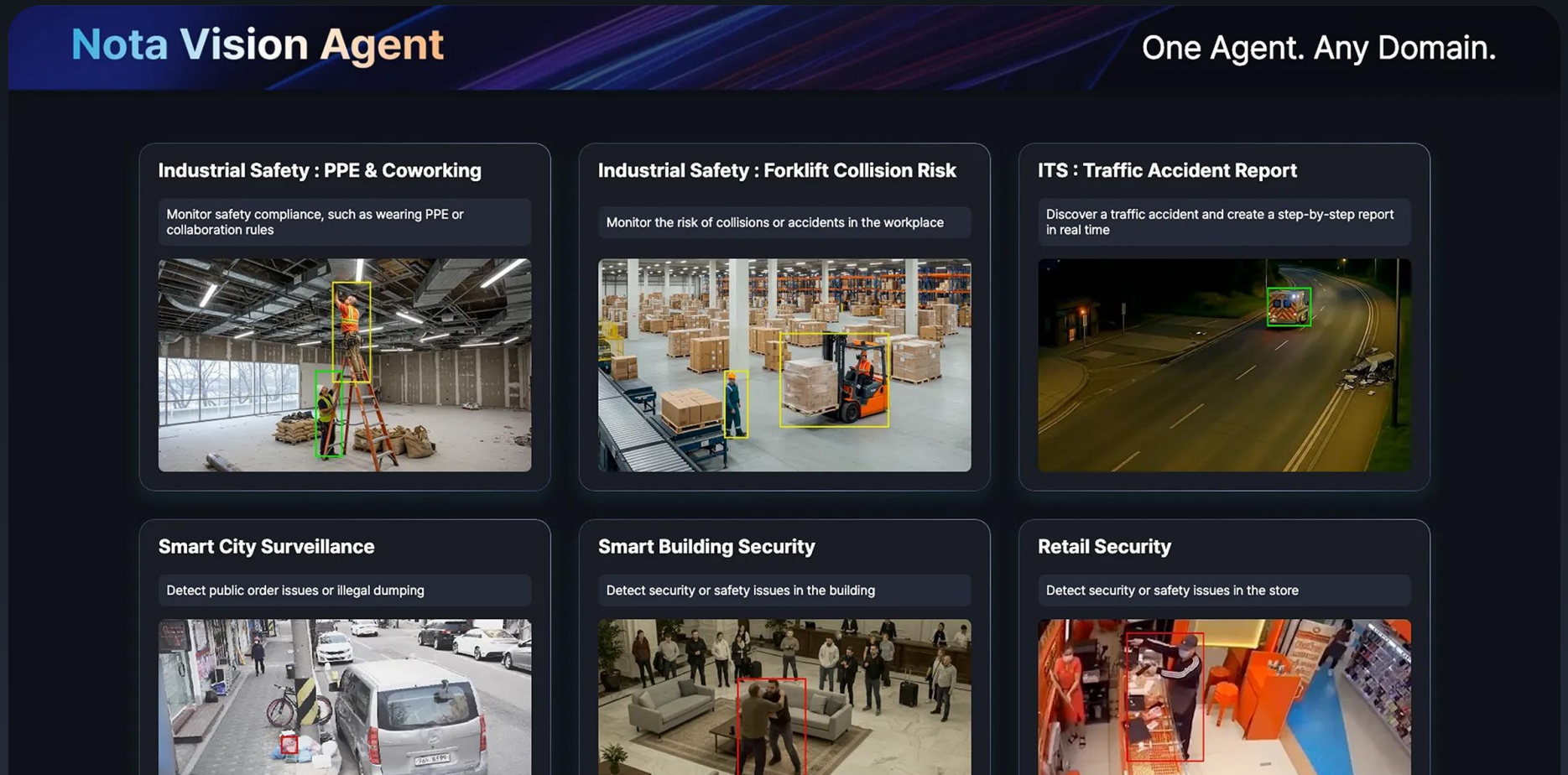
Nota AI®

# NVA

Nota Vision Agent

# NVA (Nota Vision Agent)
## A Generative AI-Powered Vision Agent

NVA (Nota Vision Agent) is a Vision-Language Model (VLM)-powered surveillance solution that autonomously perceives and understands on-site situations. It instantly detects and analyzes potential hazards from real-time video streams, dramatically enhancing safety management efficiency across industries.



# Key Features

## Real-time Contextual Scene Understanding

- Enables proactive awareness and accurate detection of previously unseen anomalies
- Delivers instant alerts to enable swift response and prevent accidents

## Automated Prompt-driven Intelligence

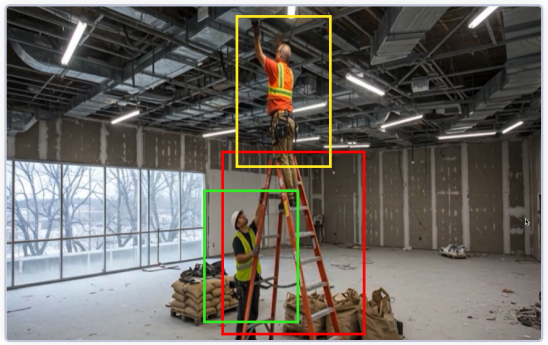
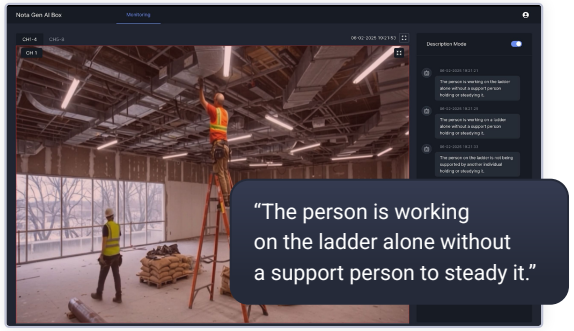
- Defines detection scenarios through natural language prompts
- Supports intuitive video search and auto-generated reports, reducing manual workload

## Edge-oriented Execution

- Processes video data entirely on-site, ensuring privacy and compliance
- Delivers low-latency inference on resource-constrained hardware

# Technical Capabilities

## Combined Strengths of CV and VLM

| | Detection Methodology | Strengths |
|---|---|---|
| CV |  Ladder<br>  Person<br>  | High-speed, high-precision detection of trained objects<br>Reliable for repetitive, rule-based detection tasks |
| VLM |  Two workers are working together using a ladder<br>  Two workers are working together using a ladder<br>   | Interprets complex situations and environmental context<br>Ideal for behavior and judgment-based detection |

**Proficient in Both CV and VLM**, Nota AI Delivers Optimal Solutions Tailored to **Each Customer's Needs**

# Technical Capabilities

## Scenario-Based Model Application

#1

### Well-Defined Object Detection

Detecting hazardous elements with distinct characteristic in specific areas

#2

### Requiring Value Judgement

Analyzing and predicting potential damage levels or spread areas based on current condition

#3

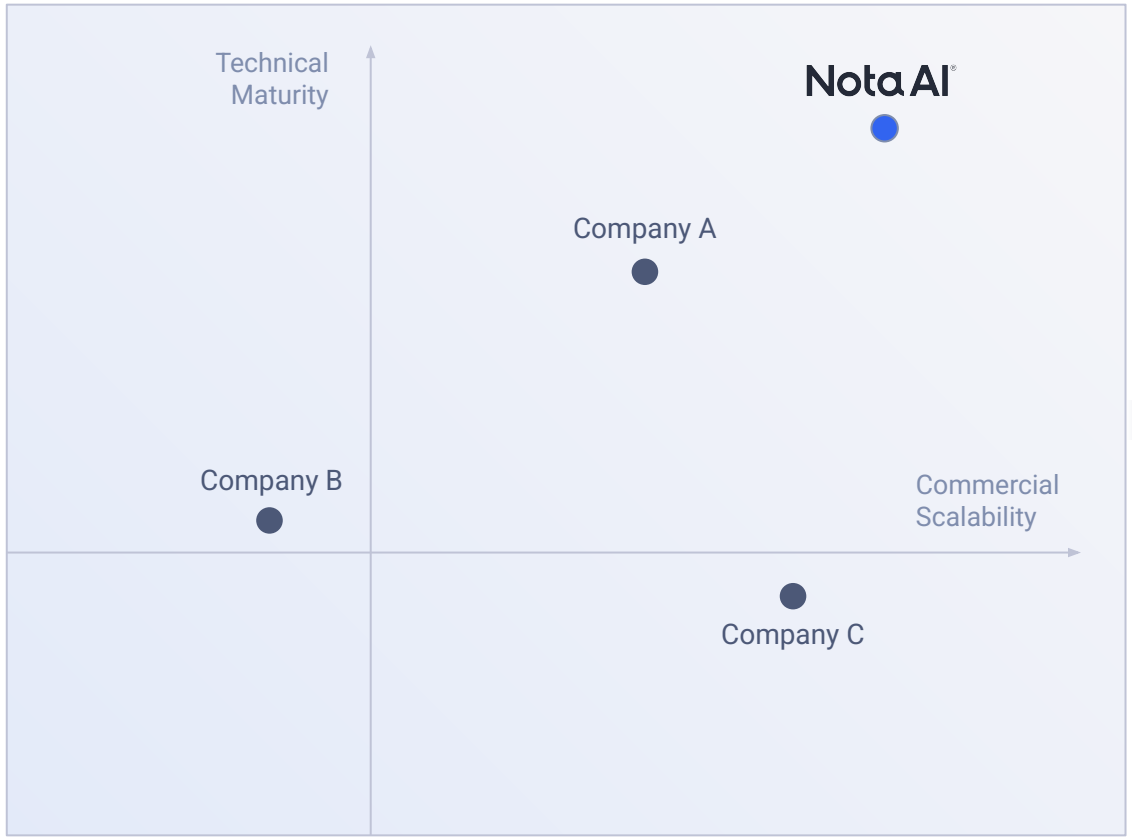
### Behavior-Based Hazard Detection

Identifying potential risks such as SOP violations, negligence, and unsafe actions to proactively prevent incidents

Both **CV** and **VLM** Appropriate

VLM Required

# Competitive Advantage




Evaluation Criteria

* **Technical Maturity**: Expertise in developing and deploying diverse Vision AI models
* **Commercial Scalability**: Proven ability to deliver end-to-end solutions from PoC to full-scale production

# Market Positioning

| Evaluation Criteria | | Nota AI | A | B | C |
|---|---|---|---|---|---|
| Technical Maturity | VLM Capability | ✓ | △ | ✗ | ✗ |
| | Vision Model Versatility | **High** | Limited | Low | Limited |
| | Edge Deployment | ✓ | △ | ✓ | ✗ |
| Commercial Scalability | Commercial Deployment | **High** | High | High | Limited |
| | End-to-End Delivery | ✓ | △ | △ | ✗ |
| | PoC-to-Production | ✓ | ✓ | ✓ | △ |

Legend

✓ Available
✗ Not available
△ Partial

High: Multiple commercial deployments
Limited: Few deployments
Low: PoC-level only

# Competitive Advantage

## Key Differentiators

### Multi-Model Vision AI Expertise

Ability to develop and deploy vision AI models—including VLM and CV—in the most effective combination for each scenario.

### Edge Deployment Capability

Designed to operate reliably within constrained hardware and network environments, powered by proprietary AI compression and optimization technologies.

### Proven End-to-End Delivery Experience

Validated through commercial deployments, scaling from PoC to full production systems.

# Customer Benefit

## Achieving High Detection Performance

- Combines various vision AI technologies to address a wide range of detection requirements
- Customizes model configurations based on site-specific characteristics and detection complexity

## Maximizing Business Productivity

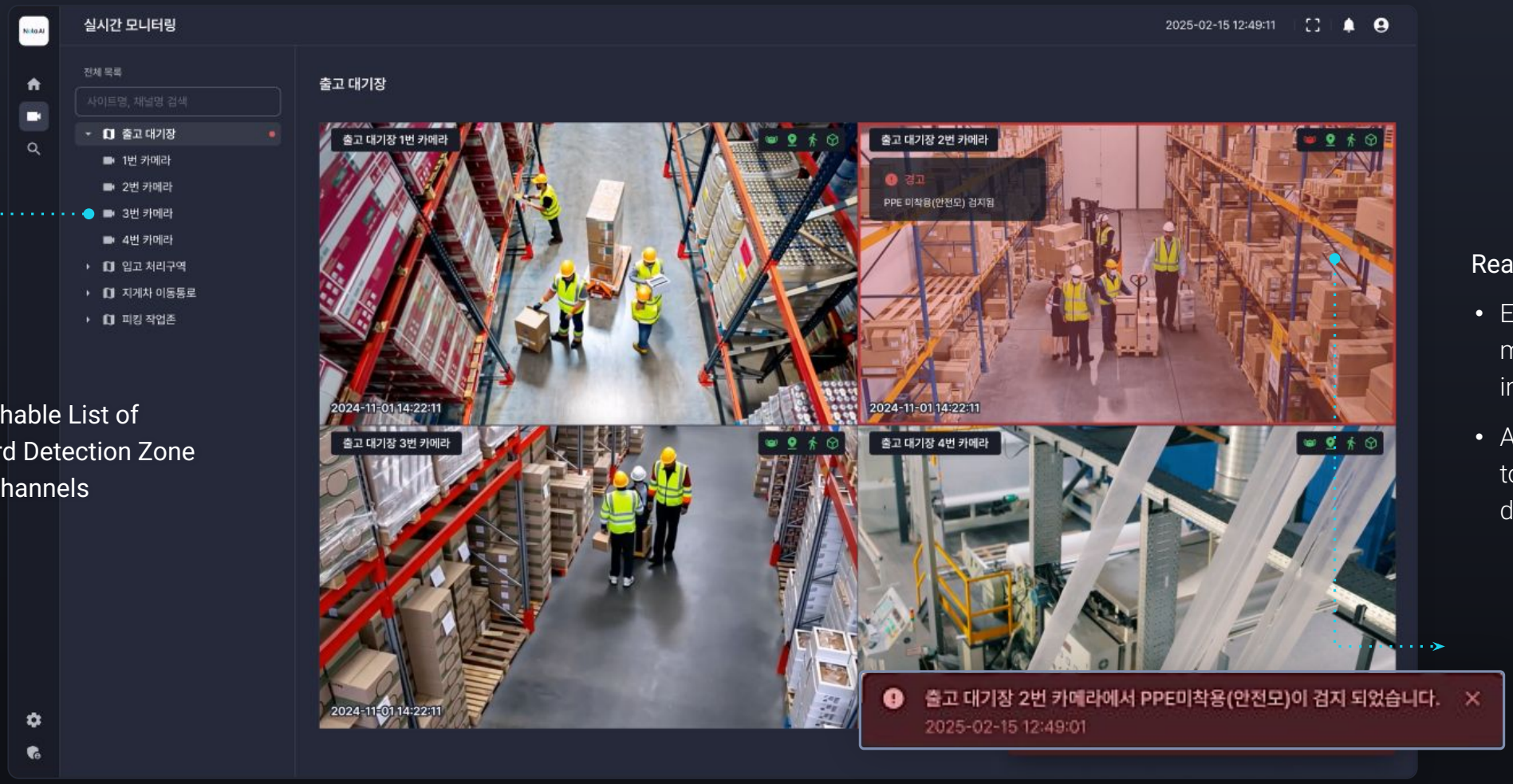
- Compatible with existing CCTV and video management systems without the need for additional equipment purchases
- Can be applied on-site within 2–3 weeks without complex pre-training

## Improving Operational Efficiency

- Reduces administrative workload with features such as automated analysis reports and video search
- Enables efficient personnel allocation through automated CCTV monitoring

# NVA In Action

## Real-Time Monitoring



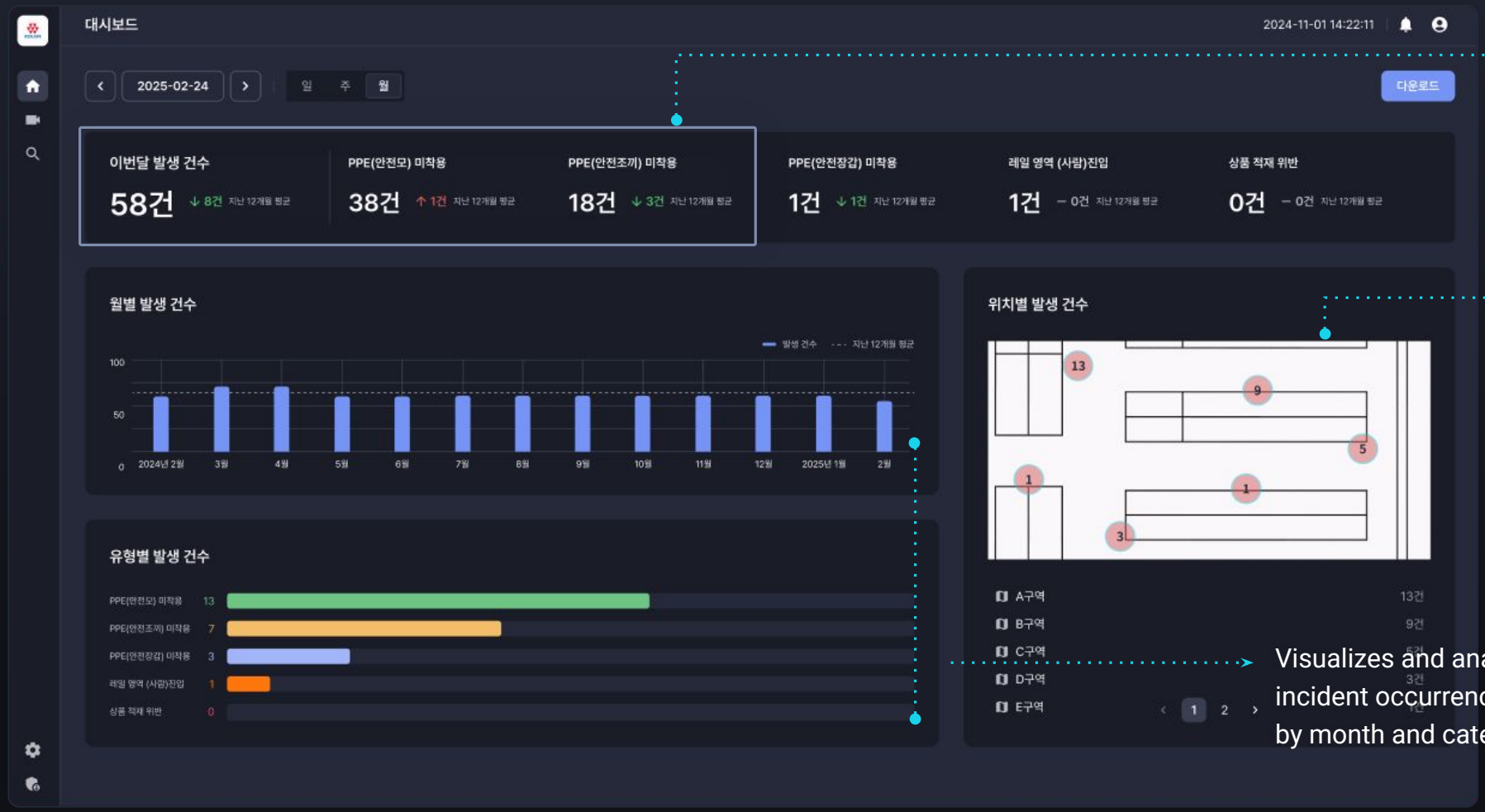

Searchable List of Hazard Detection Zone and Channels

### Real-Time Hazard Alerts

- Enables proactive safety measures through integrated real-time alerts
- Allows monitoring personnel to respond immediately to detected hazards

# NVA In Action

## Dashboard



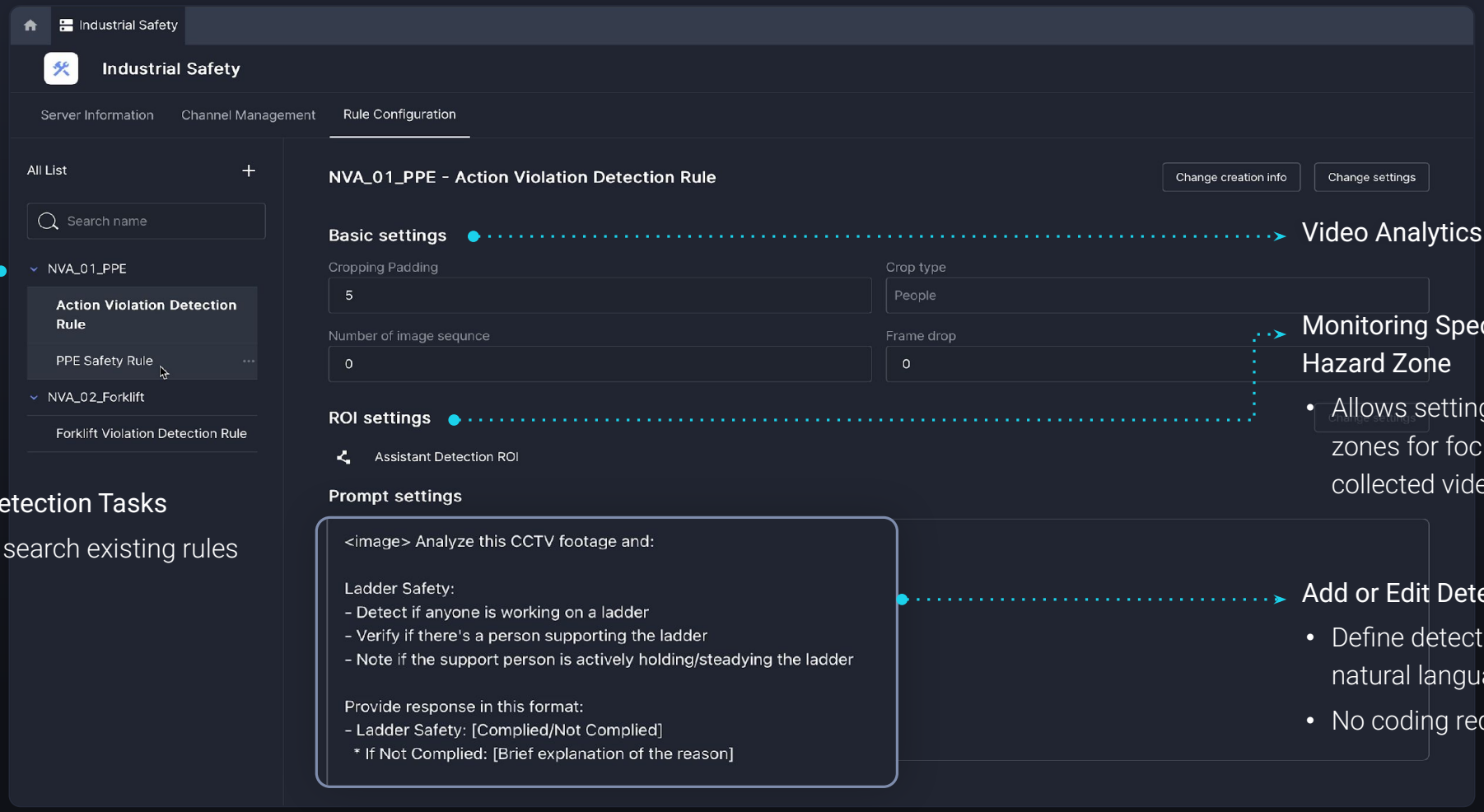

Industrial hazards are categorized, tracked, and converted into data

Displays the precise location of each hazardous incident

Visualizes and analyzes incident occurrence data by month and category

# NVA In Action

## Rule Setting




### List of Detection Tasks

- Easily search existing rules

### Video Analytics Setting

### Monitoring Specific Hazard Zone

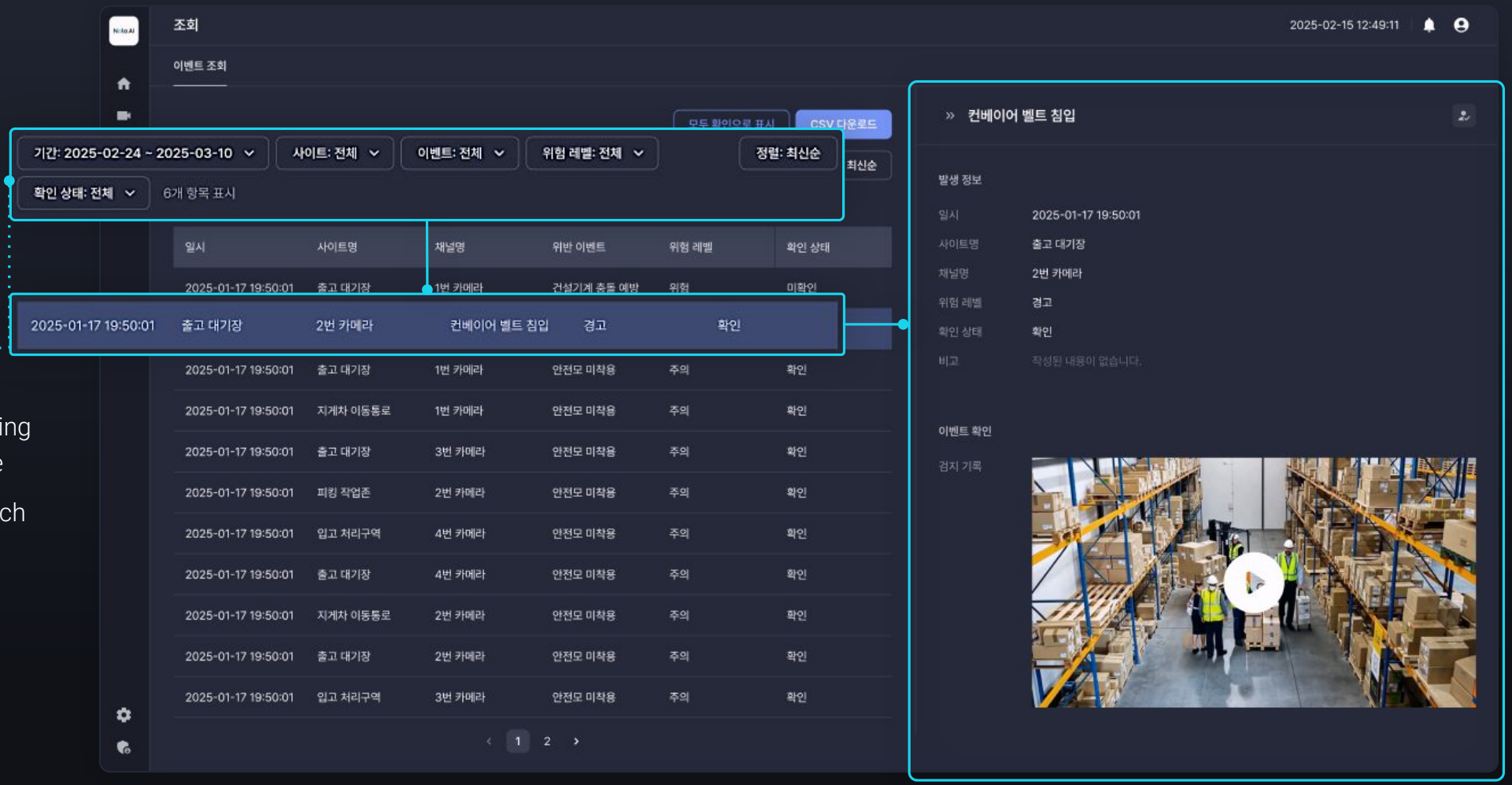
- Allows setting customizable zones for focused analysis of collected video and images

### Add or Edit Detection Rules

- Define detection rules using natural language prompts
- No coding required

# NVA In Action

## Incident Search

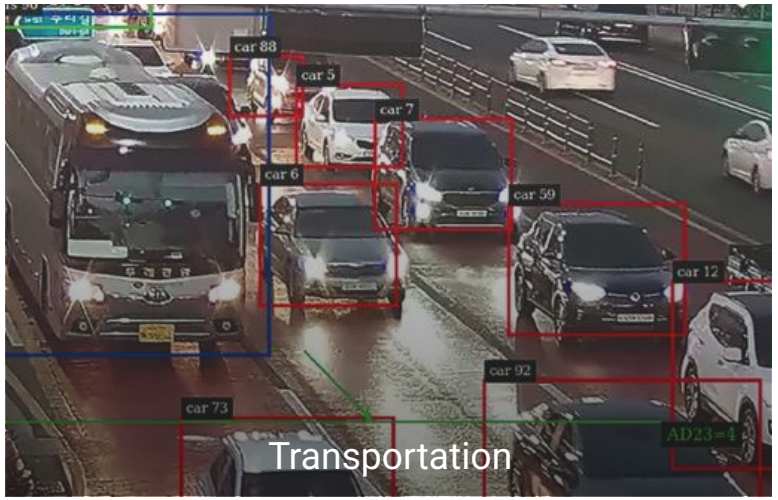


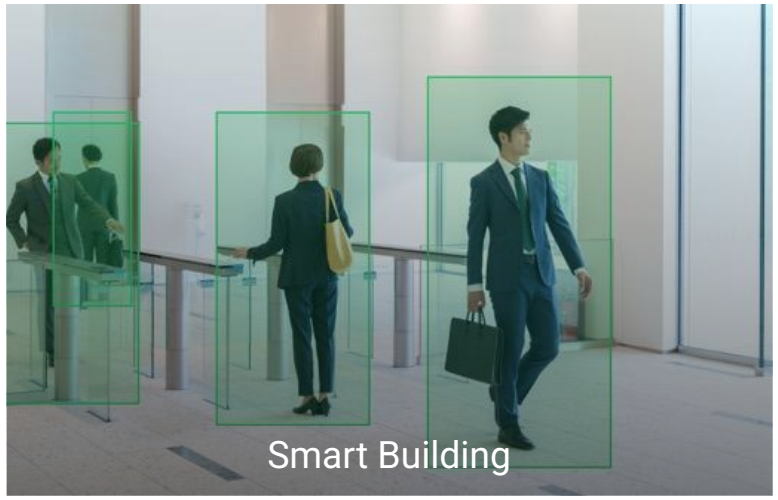

### Search Specific Incident

- Search specific events by applying filters from all collected footage
- Supports natural language search
- Eliminates the need for manual review of all footage

# Applicable Industries







# Use Cases

## Industrial Safety

### Chemical & Textile Manufacturer “K”

**Challenge**

**Problem 01**

Traditional monitoring systems lack the ability to interpret complex worker behaviors

**Problem 2**

Personal protective equipment (PPE) violations and unsafe behaviors often go unnoticed until incidents occur

**Solution**

**Equipment Interlock**
as a potential safety mechanism to halt machinery in hazardous zones

**SOP Compliance Monitoring**
detects violations such as improper cleaning, incorrect loading, and floor-level repackaging through VLM-powered analysis

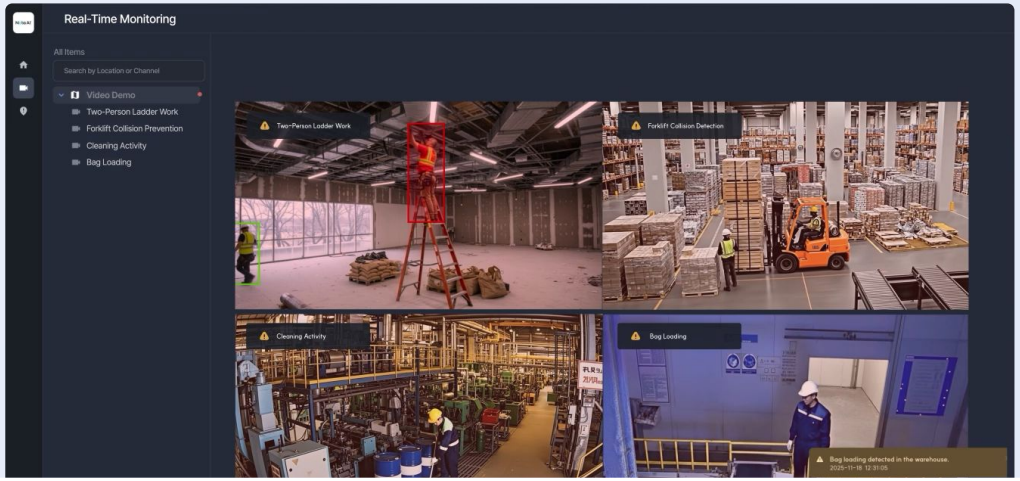
**Result**

**Proactive Accident Prevention**

Proactively detects and blocks human error-based hazards, preventing accidents at the source

**High SOP Compliance Accuracy**

Achieved F1 Score of 85+ for SOP compliance accuracy across all tested tasks



# Use Cases

## Surveillance

### Municipal Government "G"

**Challenge**

**Problem 01**

Illegal dumping is difficult to monitor consistently across widespread public areas

**Problem 2**

Smoke and burning activities often go undetected until fire incidents escalate

**Solution**

**High-accuracy NVA**
detects smoke and burning activities to prevent fire incidents in real-time

**Contextual video intelligence**
identifies illegal dumping behaviors that traditional monitoring systems miss

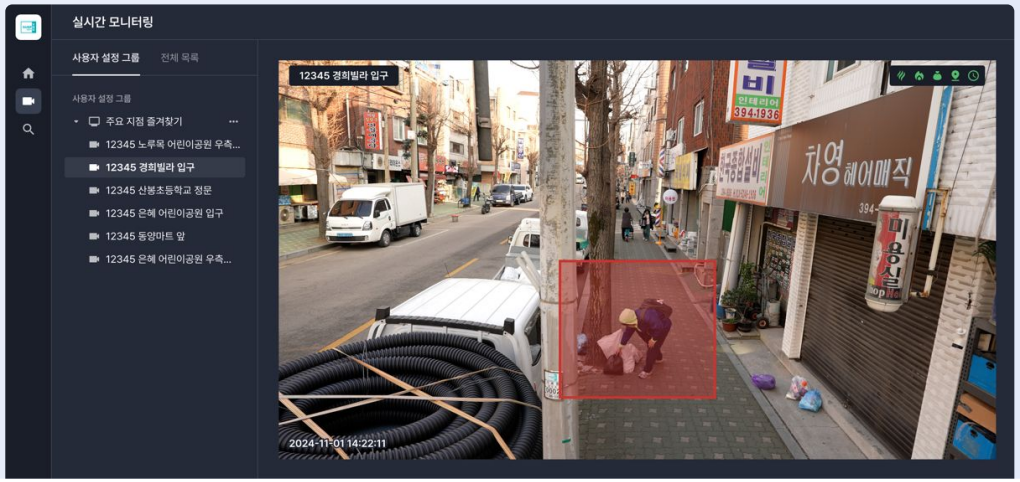
**Result**

**Enhanced Public Safety Response**

Improved response efficiency for public safety incidents

**Privacy-Compliant Monitoring**

Enabled consistent monitoring while maintaining strict privacy and data governance compliance



# Use Cases

## Transportation

### UAE Roads and Transport Authority

**Challenge**

**Problem 01**

Rapid detection of road incidents is critical across vast highway networks with high-speed traffic

**Problem 2**

Cloud-dependent systems pose challenges in latency, operational costs, and data security compliance

**Solution**

**VLM-powered NVA**
detects road incidents and anomalies in real-time directly on edge devices

**On-device processing**
ensures minimal latency while maintaining strict data privacy and security standards

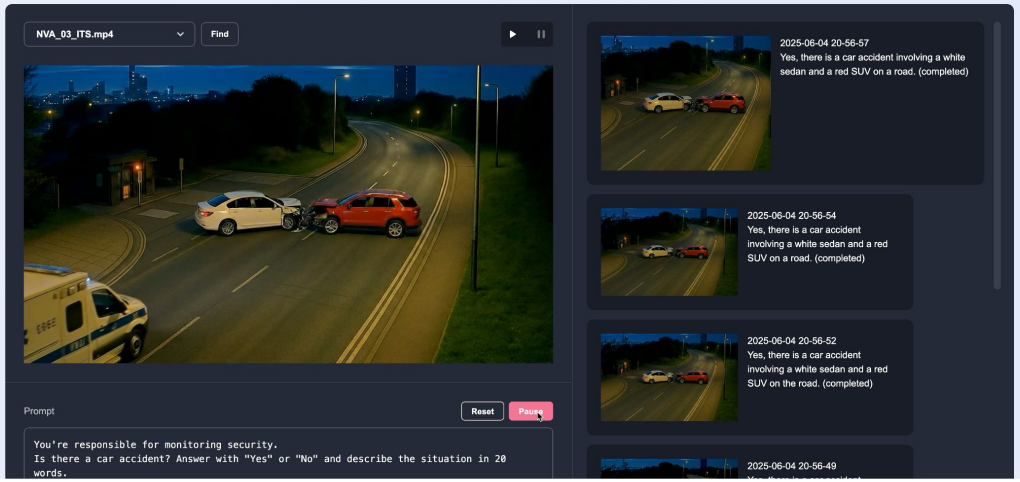
**Result**

**High Incident Detection Accuracy**

Achieved 95%+ accuracy in road incident detection during PoC validation

**Operational Cost Efficiency**

Reduced cloud dependency, lowering operational costs while enabling real-time response



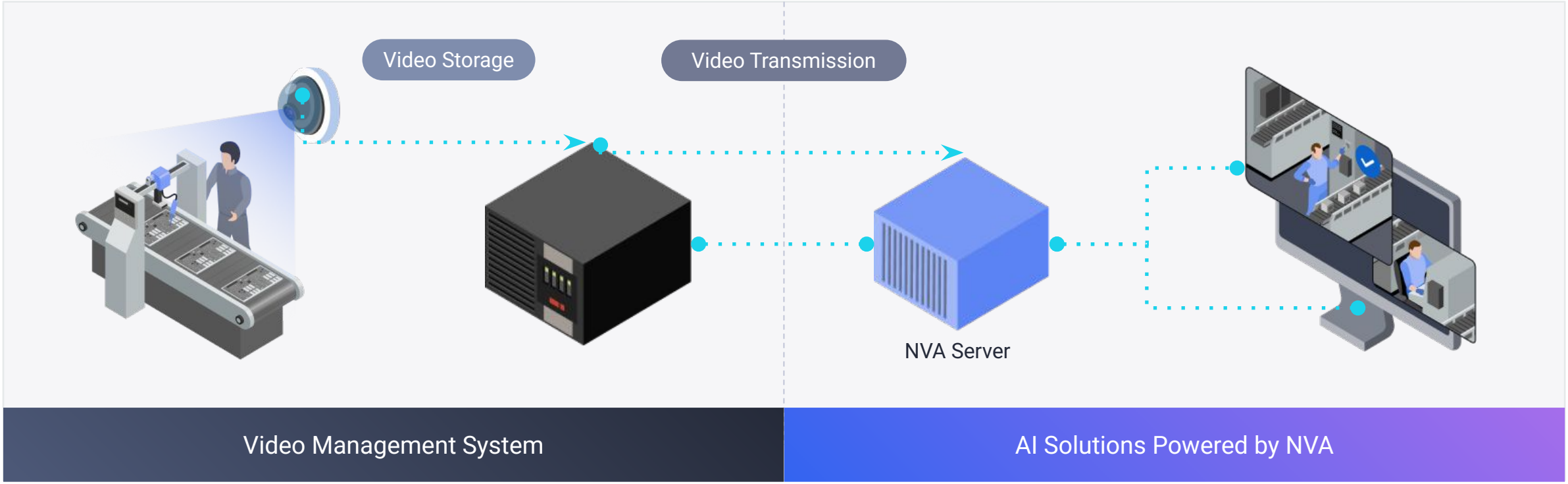
# Pipeline

## No additional equipment required

Easily integrate by connecting the ‘NVA server’ to existing video management systems.

## Rapid On-Site Deployment

NVA can be rapidly implemented in the field within just 2–3 weeks, without complex pre-training processes.



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